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**Comments on the Strategy: How to be Strategic  
Without Trying to do it All**

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“A Harvest”**

# **A Harvest Biotech Foundation International (AHBFI)**



**• California ♦ Nairobi ♦ Johannesburg**

**Website: <http://www.ahbfi.org>**

# A Harvest

- International non-profit foundation
- Global vision with an African focus to fight hunger malnutrition and poverty
- Mission: Use biotech tools for sustainable agricultural development
- Institutional structure: 3 tier
  - International network
  - Pan African
  - National downstream networks

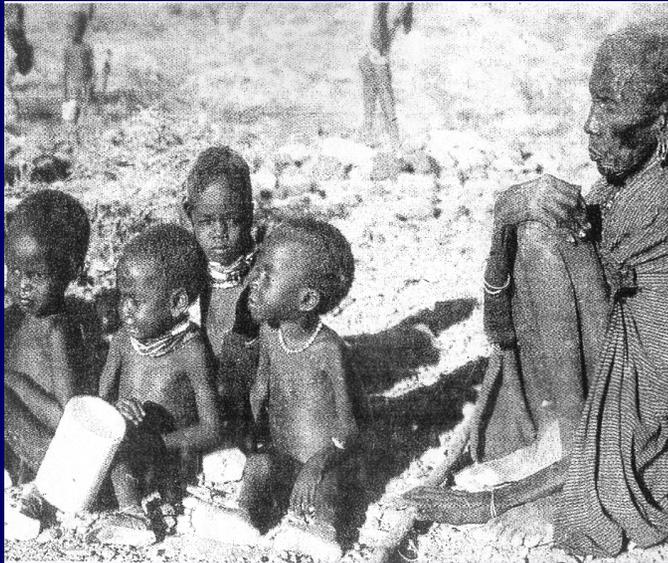
# Core values of A Harvest

- To have an African focus and a global vision
- Need driven, action & solution oriented
- Empower people with accurate biotech information to enable them make informed decisions & choices
- Committed to African coalition & leadership-development to fight hunger and poverty
- Committed to the whole-value-chain product-delivery including marketing links for impact to small-scale farmers
- Committed to integrity, accountability & transparency to our customers: small scale farmers, local and international communities
- Willing to associate, collaborate and partner with like-minded organizations to achieve greater impact

# A Harvest Programmes

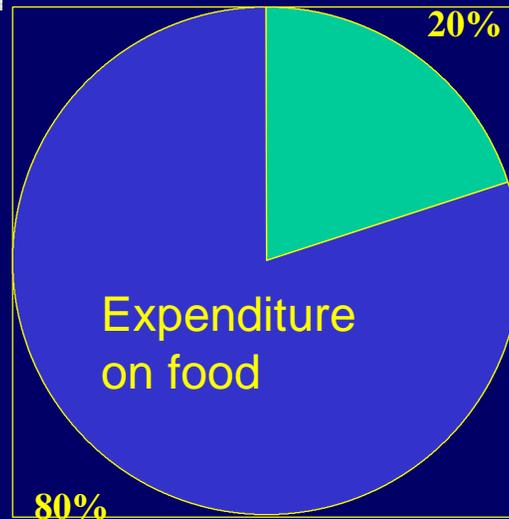
- Biotech communication
  - Information outreach
  - Website: information & education resource
  - African biotech materials-development
- Projects implementation strategies
  - Commercialization of TC & GM-crops & products for small-scale farmers in East & West Africa
    - Capacity Building
  - Training in effective Biotechnology/Biosafety information access and communication strategies

# The need to fight hunger and poverty



Poverty levels in Africa

Hunger and Poverty



Family earnings

# Causes of Hunger & Poverty in Africa

- Poor agricultural yields; diseases & pests
- Drought & floods; Famine
- Limited agri-research impact
- Political instability and civil strife
- Population growth rate > economic growth
- Poor infrastructures
- HIV/AIDS
- Poor access to information and technology

# Comments on the strategy: How to be Strategic without trying to do it all

- Project driven strategy
- Effective Biotechnology outreach as part of project development
- Non-traditional partners are included in order to achieve impact
- The whole value chain strategy is engaged

# Networking for Impact

- Different networking partners need to identify their role according to their comparative advantage in the whole value chain while focusing on impact; include
  - Facilitating technology transfer
  - information outreach to grassroots
  - Technology evaluation with farmers
  - Seeds and seedling providers
  - Seeds distributors to the farmers
  - Marketing agents for products

# Implementation Strategy focused on impact

## Depends on:

- **Case by case and depends on the need and expected impact**
- **Starts by identifying the needed market for the product**
  - **Home use as food**
  - **Income generation, needs real market**
- **Market local urban or export**
- **The product can generate income to fulfill food needs e.g. pyrethrum in Kenya**

# Need Identification

- **Need identification includes stakeholders inputs**
- **Considers the whole farming system, including social economic and gender issues**
- **Considers the available resources, including grassroot extension services and networks in order to achieve impact**
- **Considers the available information, skills and expertise to achieve the mission and identifies the gaps and bottlenecks**

# Implementation Strategy – Technology Access Issues

- Considers the following:
- Availability of the technology (improved seeds) from the local or international companies or nurseries
- Affordability of the seeds or seedlings to the target communities
- Access and distribution of the seeds or seedlings to target communities

# Implementation Strategy – Technology Evaluation and Management issues

- Stakeholders (farmers) need to be part of technology evaluation
- Farmers and researchers need to generate information on the crop/product evaluation together
- Farmers and researchers need to evaluate product impact together before large scale deployment of the crop/product
- Farmers need to be part of the solution identification to prevailing crop management issues e.g. water, manure

# Marketing Strategy

- Includes home use as food where applicable
- Involves post Harvest handling and management
- Need to establish market link for income generation
- Can generate jobs through farmer driven entrepreneurship
- Can generate family and community welfare through sustainable rural development

# Project Sustainability

- The project used to consider and factor in exit strategy by the researchers and facilitators
- Establishment of an agency for promotion and marketing of the crop/product is necessary for sustainability before exit
- Farmers growers Associations or co-operative managers can fulfil that role
- Proper government policies and infrastructures such as rural access roads are important

# Sigatoka Disease



# Participatory Rural Appraisals



# African Private Biotech Sector



- Focus on local needs eg banana, sugarcane, pyrethrum
- Focus on food security & forestry
- Promote African local and export trade

# Technology Transfer: Doing it with the farmers



# Field training & management



# TC Banana harvest (45-60kgs)



# Acknowledgements: Banana Project

- Implementing agents: KARI and Farmers
- Funding agents: RF and IDRC
- Development partners: DuRoi, ITSC, JIC, ZEF, ATPS, GTL, Wangu Investments
- Facilitator: ISAAA / Dr. Wambugu's leadership

# Impact of MSV on Production



**MSV infected maize**



**Healthy maize**

# Maize: Constraints - Maize Streak Virus

## Stem borers



- **MSV** major constraint in Africa.
- Yield losses: 20-100% in some years.
- 20 yrs. research by IRS and NARS but no impact to farmers in Kenya.

# Impacts



KARI released MSV resistant hybrid in Nov. 2000 after 5 yrs biotech intervention VS 20 yrs conventional breeding with no impact.

10 other MSV resistant hybrids being evaluated in National performance Trials

Germplasm base for future improvements

# Acknowledgements: Maize Project

- Implementing agents: KARI and Farmers
- Funding agents: RF
- Development partners: JIC, ICIPE, UC, Norvatis Seeds
- Facilitator: ISAAA / Under Dr. Wambugu's leadership

# Production Constraints



**Virus and weevil  
infected**



**Healthy potato**

# Training on GM trials



**Transgenic sweet potato “mock trials”, capacity building and evaluating the economic importance of the transgenic variety.**

# Transgenic Field Trial



## Expected Impact

- Increased annual production by at least 15%
- Increased farmers income (est.US\$ 41 M. annually)
- Food security for 1 million people without additional production costs.

# Acknowledgements: Sweetpotato Project

- Implementing agents: KARI, KEPHIS and Farmers
- Funding agents: Main agent:- Monsanto  
Others: USAID/ABSP, WB
- Development partners: Univ. of Missouri, CIP, Monsanto, ARC/VOPI
- Facilitator: ISAAA / Under Dr. Wambugu's leadership

# Modifying Africa

How biotechnology can  
benefit the poor and hungry,  
a case study from Kenya

Florence Wambugu

Website: <http://www.modifyafrica.net>

